Object Oriented Programming, Exercise 1

Topics: Set up environment, increase coding routine in Python, using Git
Make a Git commit at least after every task.
Code in Python3 and follow the style guide.

1. Start by installing your preferred IDE. Then write a code that prints out Hello in order to verify that your development environment is properly set up.
2. Code a list of at least 10 items and fill it with numbers asked from user. Do the same with strings. Print out both lists. Then fill the number list with randomly generated numbers and print it out.
3. Arrange numbers in the list from smallest to largest and strings in alphabetical order and print out the lists.
4. Write a program which repeatedly reads integers until the user enters 0. Print out the number of negative integers. Use functions in your solution.
5. Add a function to the previous task that counts the number of even integers that were among the entered.
6. Add to the previous task a function that counts the sum of the positive integers divisible by three.
7. Process with an arithmetic progression (AP) 2, 4, 6, … . The maximum value of the AP is obtained from the user. Count the number of terms that appeared in the AP, the sum of the terms and the sum of the squared terms. Use functions in your solution.
8. Code a simple (and textual) implementation of Rock-Paper-Scissors game. Best of 3 games wins.
    a. Plan your game first and code piece by piece: read input from user, generate random number to get computer's choice, then check who wins and keep track of victories.
    b. Use functions.
9. Code a function that *returns* a random number between 1-6 when calling it. Print out the number where the function is called (so do not print the number inside the function). Name the function properly (see style guide).
10. Explain the following terms (use your own words, do not copy paste answers from Internet). You can answer in Finnish or English.
    a. Procedural programming
    b. Functional programming
    c. Object oriented programming
    d. Class (in programming)
    e. Object (in programming)
    f. Instance (in programming)
    g. Encapsulation (in programming)

You'll find help by Googling. Also check these out:
https://www.w3schools.com/python/default.asp
https://www.youtube.com/user/thenewboston
https://www.w3schools.com/python/default.asp